



GREEN INFRASTRUCTURE PLAYBOOK

STATE OF IOWA

PRODUCED IN PARTNERSHIP WITH THE US ENVIRONMENTAL PROTECTION AGENCY, REBUILD IOWA OFFICE, IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP, AND IOWA DEPARTMENT OF ECONOMIC DEVELOPMENT - JULY 2010



Resources / Case Studies

Resource	Agency	Website
Backyard and Urban Conservation	Natural Resource Conservation Services	http://www.ia.nrcs.usda.gov/features/Backyard.html
Urban Conservation Photo Gallery		http://www.ia.nrcs.usda.gov/features/urbanphotos.html
Rain Garden Incentive Program for Homeowners in Pottawattamie County		http://www.ia.nrcs.usda.gov/features/PCraingardens.html
Iowa Rain Garden Projects	Iowa Department of Agricultural and Land Stewardship	http://www.urbanwaterquality.org/RainGardens/projects1.htm
Brochure for the Urban Conservation Program		http://www.iowaagriculture.gov/FieldServices/pdf/Urban_Conse rvation_Brochure.pdf
Iowa Regional Watershed Coordinators		http://www.iowaagriculture.gov/waterResources/pdf/RegionalCo ordinators.pdf
Elmhurst, IL multiple practices on one site	One Drop at a Time – New Resourceful Paradigms at 168 Elm Ave	http://www.delafleur.com/168_Elm/index.htm



Resource	Agency	Website
Iowa Stormwater Management Manual Native Landscaping	Iowa State University, CTRE (Center for Transportation Research and Education)	http://www.intrans.iastate.edu/pubs/stormwater/documents/2E-6NativeLandscaping.pdf
Iowa Stormwater Management Manual	Iowa State University, CTRE (Center for Transportation Research and Education)	http://www.ctre.iastate.edu/PUBS/stormwater/index.cfm
Iowa Stormwater Education Program	Iowa Association of Municipal Utilities	http://iowastormwater.org/ http://www.rainscapingiowa.org/
List of Qualified Iowa Rain Gardeners		http://www.iowastormwater.org/Portals/0/pdf/RG%20Exam%20May%202009%20Passed.pdf
IDNR Stormwater manuals, brochures, videos, etc.	Iowa Department of Natural Resources	http://www.iowadnr.gov/water/watershed/stormwater.html
Iowa Department of Natural Resources General Permit #2		www.iowadnr.com/water/stormwater/index.html
Iowa Stormwater Best Management Practices Database		http://programs.iowadnr.gov/stormwaterbmp/Default.aspx
"A Watershed Year: Anatomy of the Iowa Floods of 2008"	Edited by Cornelia F. Mutel, published by the University of Iowa Press, 2010	http://www.uipress.uiowa.edu/books/2010-spring/mutel-water.htm



Resource	Agency	Website
IOWATER Volunteer Water Quality Monitoring Program		http://www.iowater.net/
The Natural Resources GIS Library	Iowa Department of Natural Resources Geological Survey	http://www.igsb.uiowa.edu/nrgislib/
Water: Drinking, Stormwater and Wastewater	Iowa Department of Economic Development	http://www.iowalifechanging.com/community/resources/water.aspx
Green Roofs in Iowa		http://www.iowalifechanging.com/community/resources/greenroofs.aspx
Iowa Green Streets Criteria		http://www.iowalifechanging.com/community/downloads/green/Iowa-Green-Streets-Criteria.pdf
Green Infrastructure	U.S. EPA	http://www.epa.gov/greeninfrastructure
Watershed		http://www.epa.gov/owow/watershed/
Nonpoint Source Program		http://www.epa.gov/owow/nps/
Stormwater Program		http://cfpub.epa.gov/npdes/home.cfm?program_id=6
Low Impact Development		http://epa.gov/nps/lid/
Smart Growth Program		http://www.epa.gov/smartgrowth/



Resource	Agency	Website
Protecting Water Quality With Smart Growth Strategies and Natural Stormwater Management in Sussex County, Delaware	U.S. EPA	http://www.epa.gov/smartgrowth/pdf/2009_0106_sussex_county.pdf See chapter 5 for before and after images of green streets and rain gardens.
Region 7 Land Revitalization and Reuse	U.S. EPA Region 7	http://www.epa.gov/region07/land_revitalization/index.htm
Portland School Raingarden Retrofit: Glencoe Elementary	Portland Bureau of Environmental Services	http://www.portlandonline.com/shared/cfm/image.cfm?id=147510
Rain Garden Soil Evaluation Tool	West Michigan Environmental Action Council	http://www.raingardens.org/Evaluate_the_Soil.php



Plants for Rain Gardens

Resource	Agency	Website
Iowa Rain Garden Manual - plant list is on page 26	Iowa Department of Agricultural and Land Stewardship	http://www.agriculture.state.ia.us/press/pdfs/RainGardenManual.pdf
Iowa Native Plant Database and Invasive Plant list	Iowa Living Roadway Trust Fund	http://www.iowalivingroadway.com/IowaPlants.asp
Detailed plant list for Iowa Rain Gardens	Prairie Rivers of Iowa Resource Conservation & Development	http://prrcd.org/Recommended_Plants/raingarden%20native%20spp.htm
Plants for Stormwater Design	Minnesota Pollution Control Agency	http://www.pca.state.mn.us/publications/manuals/stormwaterplants.html
Wisconsin Native Plants for Rain Gardens, with photos	Wisconsin Department of Natural Resources	http://dnr.wi.gov/runoff/rg/RaingardenPlantList.pdf
Wisconsin Shade Plants, with photos		http://dnr.wi.gov/runoff/rg/plants/shady/ShadyRGPlantList-photos.pdf



Funding Resources

Grant/Loan Name	Agency	Website
Iowa Community Development Block Grant (CDBG) Program	Iowa Department of Economic Development	http://www.iowalifechanging.com/community/community/default.aspx
State Revolving Fund for Wastewater, Drinking Water ¹ , and Stormwater	Iowa Finance Authority Iowa Department of Natural Resources	http://www.iowasrf.com/
Iowa Watershed Improvement Review Board ²	Iowa Department of Agriculture and Land Stewardship	http://www.iowaagriculture.gov/IWIRB.asp
Watershed Planning Grant	Iowa Department of Natural Resources	http://www.iowadnr.gov/water/watershed/planning.html
Watershed Development and Planning Assistance Grant	Iowa Department of Agriculture and Land Stewardship Iowa Department of Natural Resources Natural Resource Conservation Services	http://www.iowaagriculture.gov/waterResources/pdf/protocolBrochure.pdf
Water and Waste Direct Loan and Grant Program ³	U.S. Department of Agriculture Rural Development Program	http://www.rurdev.usda.gov/ia/cp_util_ww-Dir.html
EPA Region 7 Grant Opportunities	U.S. EPA Region 7	http://www.epa.gov/region7/economics/r7_grant_opportunities.htm



Grant/Loan Name	Agency	Website
EPA Grants	U.S. EPA	http://www.epa.gov/ogd/grants/funding_opportunities.htm
Federal Grants	Grants.gov	http://www.grants.gov

¹ Some of the key types of State Revolving Funds include (from the Iowa SRF website):

Stormwater Grants: The types of eligible projects include infiltration practices, soil quality restoration, native landscaping, detention basins, ponds or wetland systems, pervious paving systems, grassed waterways or other practices that are shown to improve or protect water quality

Local Water Protection Program: The types of eligible projects include composting facilities, contour buffer strips, field borders or windbreaks, filter strips, riparian forest buffers, terraces, grade stabilization structures, grassed waterways or other practices that are shown to improve or protect water quality.

Planning and design (P&D) loans: 0% interest for up to three years to cover engineering and project development costs. P&D loans can be rolled into an SRF construction loan, or paid off with other permanent financing.

Construction loans: Lowest cost funds compared to other financing options, with interest rate of 3%. Loan term is up to 30 years, based on the average life of the project components, for all Clean Water SRF loans. For Drinking Water SRF loans, disadvantaged communities can qualify for up-to-30-year terms.

Contact Patti Cale-Finnegan, DNR State Revolving Fund Coordinator, 515-725-0498 or patti.cale-finnegan@dnr.iowa.gov.

² Iowa Watershed Improvement Review Board details (from IDALS website):



EPA Section 319 Funds. These funds are provided by the U.S. Environmental Protection Agency (EPA) for distribution through the Iowa Department of Natural Resources. These funds are used for various nonpoint source pollution control activities including water quality improvement and watershed projects. EPA Section 319 funds are appropriated by Congress to the EPA, a federal agency.

Water Protection Fund (WPF). WPF funds are appropriated by the Iowa Legislature through the Resource Enhancement and Protection (REAP) account. This program is administered through the Iowa Department of Agriculture and Land Stewardship-Division of Soil Conservation (IDALS-DSC) to address ground and surface water quality concerns from point and nonpoint sources of pollution.

Watershed Protection Fund (WSPF). WSPF funds are appropriated by the Iowa Legislature and are administered by the IDALS-DSC. These funds provide state support to locally-led watershed protection initiatives. These funds are used to help develop projects that use integrated approaches to meet multiple purpose objectives.

Technical assistance on watershed planning and identifying potential sources of technical and financial assistance for watershed groups can be obtained through your Regional Coordinator. Contact information for your Regional Coordinator can be found in the following brochure:
<http://www.iowaagriculture.gov/waterResources/pdf/RegionalCoordinators.pdf>

³ USDA Rural Development funds can be used for:

- Purchase, construct, enlarge, extend and/or improve rural drinking water, sanitary sewage, solid waste disposal, and storm wastewater disposal facilities;
- Purchase major equipment related to the project;
- Pay related project expenses, such as legal, engineering, architectural, and environmental fees